

Short Course

Lunar Regolith / Simulant 101

Lunar Regolith/Simulant 101 Course Kick-Off	D. Rickman
Lunar History	J. Edmunson
Lunar Samples: Apollo Collection Tools, Curation Handling, Surveyor III and Soviet Luna Samples	J. Allton
Lunar Samples: Lunar Meteorites	B. Cohen
Terrestrial and Lunar Geological Terminology	C. Schrader
The Lunar Regolith	S. Noble
What We do Not Know and Probably Need to Know (About the Regolith)	J. Gaier
Lunar Regolith Simulants (Feedstocks, Existing Simulants, New Methods for Developing Feedstock)	D. Stoeser
Simulant Processing	S. Wilson
Elements of Regolith Simulant's Cost Structure	D. Rickman

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Synopsis

The course examines lunar regolith and simulant properties relevant to engineering. Discussion will cover the physical meaning of the properties, i.e., what is meant by “size”, “mineral”, “agglutinate”, how the properties are measured and the limitations of the measurements. Why various properties are or are not used for characterizing simulant and regolith will be covered. Genesis of the regolith will be covered to the extent it illuminates the engineering properties.

A major thread in the course will be known limitations. Limitations include such things as our knowledge of the lunar regolith, process controls, and measurement technology. Simulant handling, use, reuse, and available simulants will be addressed.

Specialized terminology will be avoided where possible and explained where needed.

Target Audience

Students are assumed to be engineers and scientists without formal training in geology. Students are expected, though not required, to have some specialized area of work which requires use or understanding of lunar regolith and/or lunar simulants.